

2015 Fourth Quarter Mining Report

Facility Name: **PolyMet Mining's NorthMet Mining Project**

Current actions: 1) Support DNR on a joint state/federal Environmental Impact Statement for a proposed copper/nickel mining and processing operation
2) 401 Certification discussions in parallel with 404 permit preparation

Project Supervisor Ann Foss

Project Manager: Jim Robin

Lead Staff: Hassan Bouchareb (AQ), Richard Clark (WQ), Jim Brist (401)

Lead Agencies: EIS: DNR, Army Corps of Engineers, US Forest Service
AQ and WQ permits, 401 Certification: MPCA

Accomplishments during this reporting period:

- MPCA staff continued to participate with the Co-lead Agencies in the process of preparing the Final EIS.

Plans for the next reporting period:

- MPCA will assist the Co-lead Agencies in executing the Final EIS process.
- MPCA staff will remain in communication with the Army Corps of Engineers on 401 Certification issues.

Facility Name: **US Steel (USS) - Minntac**

Current actions: 1) Water quality permit reissuance (NPDES/SDS Permit No. MN0057207) for the tailings basin

2) Air permit major modification (Draft Permit No. 13700005-007) for the Dry Controls Project (removal of the existing wet scrubber and installation of dry controls, including fluidized bed dry scrubber/gas suspension absorber, baghouse, and activated carbon injection on line 6)

3) Multi-media Schedule of Compliance (SOC)

4) 404 permit/401 certification application for installation of a Seep Collection and Return System on the Dark River (west side) of the tailings basin

Project Supervisor: Suzanne Baumann

Project Manager: Steve Sommer

Lead Staff: Erik Smith (WQ), Sarah Seelen (AQ), John Thomas (WQ)

Lead Agency: MPCA

Accomplishments during this reporting period:

- The Dark River Seepage Collection and Return System project 401 certification came off its second public notice on September 9, 2015. The MPCA is currently addressing comments received. At the company's request, Minnesota DNR is extending the timeframe for a Wetland Conservation Act (WCA) decision concerning the seep collection system application to January 26, 2016.
- On December 30, 2015, Minntac submitted a six month update of implementation of their groundwater sulfate reduction plan.
- On November 6, 2015, Minntac submitted a Line 3 Scrubber Treatment System Semiannual Process Improvement Update.

Plans for the next reporting period:

- Continue reviewing the application and additional information provided for a 404 permit/401 certification for installation of the Dark River Seep Collection and Return System. The MPCA may be able to issue the 401 certification. Review and respond as needed to USS submittals related to the tailings basin.
- Review and respond as needed to USS submittals about the stream mitigation as related to the Extension.

Facility Name: **US Steel - Keetac**

Current actions: 1) Water quality permit compliance schedule (NPDES/SDS Permit No. MN0031879)
 2) Water quality permit modification to modify turbidity limits (NPDES/SDS Permit No. MN0031879)
 3) USS-filed appeal related to air dispersion re-modeling requirements contained in Air Emission Permit No. 13700063-005

Project Supervisor: Suzanne Baumann

Project Manager: Steve Sommer

Lead Staff: Brandon Smith (WQ), John Thomas (WQ)

Lead Agency: MPCA

Accomplishments during this reporting period:

- On July 27, 2015, the Minnesota Court of Appeals made its decision regarding the US Steel appeal on the Keetac air permit issued on September 17, 2014. The MPCA has decided to address any changes needed to the permit as a result of the case at the time that the permit is reissued.

Plans for the next reporting period:

- Respond to the second six-month update of the MPCA approved Sulfate Reduction Plan for the water quality permits.

Facility Name: **Cliffs Erie LLC – Hoyt Lakes Mining Area and Tailings Basin Area**

Current actions: Reissuance of combined water quality permits (NPDES/SDS Permit Nos. MN0042536 and MN0054089)

Project Supervisor: Ann Foss

Project Manager: Jim Robin

Lead Staff: Richard Clark, Stephanie Handeland

Lead Agency: MPCA

Accomplishments during this reporting period:

- Continued discussions with the company to acquire necessary information for permitting.

Plans for the next reporting period:

- Continue internal discussion with the goal of refining the permitting approach and schedules for the various mining areas/discharges.

Facility Name: **Northshore Mining Company**

Current actions: 1) Water quality permit reissuance for Silver Bay Plant and Mile Post 7 (MP7) Tailings Basin (NPDES/SDS Permit No. MN0055301)
 2) Air permit major amendment application from Northshore to remove the Control City Standard and MPCA-initiated permit action to clarify the Control City Standard (Draft Permit No. TBD)
 3) EAW and 404 permit/401 certification for Peter Mitchell Pit Progression

Project Supervisor: Jeff Udd (WQ)
 Suzanne Baumann (AQ)

Project Manager: None

Lead Staff: Brandon Smith (WQ reissuance of plant site permit), Richard Clark (EAW)

Lead Agency: MPCA for AQ and WQ Permits; DNR for EAW

Accomplishments during this reporting period:

- Continued work on the reissuance of the MP7 water quality permit (NPDES/SDS Permit No. MN0055301), including receiving an update on projections for compliance with water quality-based effluent limitations for fluoride. This submittal was made to address a requirement of a March, 2015, Schedule of Compliance between MPCA and Northshore. The Schedule of Compliance also required submittals to address past water quality related violations of amphibole fiber limits.
- DNR, USACE, and MPCA are coordinating wetland monitoring requirements. MPCA issued the 401 WQ Certification on December 3, 2015.
- Work on the fiber-related air permit amendment.

Plans for the next reporting period:

- Review fluoride submittal and develop appropriate draft permit conditions for fluoride in tailings basin discharge.
- Issue 401 Certification for the Pit Progression project.
- Continue work on the fiber-related air permit amendment.

Facility Name: **United Taconite LLC - Fairlane Plant**

Current actions: Air permit moderate amendment to produce higher flux-content taconite pellets (including installing low NO_x burners on both induration lines) (Draft Permit No. 13700113-007)

Project Supervisor: Suzanne Baumann

Project Manager: Steve Sommer

Lead Staff: Hassan Bouchareb (AQ)

Lead Agency: MPCA

Accomplishments during this reporting period:

- Received and started reviewing a moderate air permit amendment application to add additional limestone handling equipment and low-NO_x preheat burners in order to produce pellets with higher flux content.
- MPCA sent a construction authorization letter allowing United Taconite to begin construction of the changes described in the July 7, 2015 moderate amendment application.

Plans for the next reporting period:

- Continue drafting the operating portion of the moderate permit amendment.
- United Taconite identified minor changes to the project layout/configuration contained in the July 7, 2015 application and requested an updated construction authorization letter. MPCA intends to issue an updated construction authorization letter after a review of the project layout/configuration changes.

Facility Name: **Hibbing Taconite Company**
Current actions: Water quality reissuance of tailings basin NPDES/SDS permit No. MN0049760
Project Supervisor: Richard Clark
Project Manager: None
Lead Staff: Ben Underhill (WQ)
Lead Agency: MPCA

Accomplishments during this reporting period:

- Reviewed submitted information for NPDES/SDS permit reissuance.

Plans for the next reporting period:

- Close and combine Mine Area water quality permit with Tailings Basin water quality permit (no longer any discharges from Mine Area).

Facility Name: **Magnetation Plant 1**

Current Actions: 1) Water quality permit reissuance (SDS Permit No. MN0069221)
2) Air quality initial permit issuance (Draft Permit No. 06100076-001)

Project Supervisor: Suzanne Baumann

Project Manager: None

Lead Staff: Erik Smith (WQ), Ben Wenkel (AQ)

Lead Agency: MPCA

Accomplishments during this reporting period:

- Continued work on the draft SDS permit reissuance for Magnetation Plant 1.
- Limited work on draft air quality permit.
- Notification to stakeholders and interested parties of work start on draft air quality permit.

Plans for next reporting period:

- Continue work on the draft permits.

Facility Name: **Magnetation Plant 2**
Current Actions: 1) Water quality permit reissuance (SDS Permit No. MN0069868)
Project Supervisor: Suzanne Baumann
Project Manager: None
Lead Staff: Ben Underhill (WQ), Erik Smith (WQ)
Lead Agency: MPCA

Accomplishments during this reporting period:

- Responded to comments on draft water quality permit and prepared final permit.
- SDS water quality permit reissued 10/13/15.
- Magnetation reported seepage at a tailings dike during their annual October seep survey.

Plans for next reporting period:

- Respond to report of dike seepage from October, 2015 seep survey.

Facility Name: **Mag Mining Plant 4**
Current Actions: Air quality initial permit issuance (Draft Permit No. 06100079-001)
Project Supervisor: Suzanne Baumann
Project Manager: None
Lead Staff: Sarah Seelen (AQ)
Lead Agency: MPCA

Accomplishments during this reporting period:

- The draft permit was placed on public notice on September 25, 2015. The MPCA held a draft permit public informational meeting on October 15, 2015. The public comment period ended on October 26, 2015.

Plans for next reporting period:

- The MPCA received comments on the draft permit and is responding to those comments. The final permit is anticipated to be issued during this reporting period.

Facility Name: **Mining Resources, LLC**

Current Actions: 1) Air quality initial permit issuance (Draft Permit No. 13700341-001)
2) Water quality permit major modification (SDS Permit No. MN0070050)

Project Supervisor: Suzanne Baumann

Project Manager: None

Lead Staff: Sarah Seelen (AQ), Stephanie Handeland (WQ)

Lead Agency: MPCA

Accomplishments during this reporting period:

- The MPCA began drafting an initial air quality permit for Mining Resources, LLC.
- The company requested to withdraw its September 2014 permit application for the major permit modification. MPCA closed out the permit action in October 2015.

Plans for next reporting period:

- The MPCA will continue working on a draft air quality permit and anticipates completing a draft permit for internal review.

Facility Name: **Twin Metals**

Current actions: Support DNR on an Environmental Assessment Worksheet for a proposed bulk sample

Project Supervisor: Suzanne Baumann

Project Manager: Ann Foss

Lead Staff: Vacant

Lead Agency: DNR

Accomplishments during this reporting period:

- No MPCA activity during this reporting period.

Plans for the next reporting period:

- Continue to assist DNR as needed.

MAJOR PERMIT APPLICATIONS RECEIVED THIS QUARTER

- ArcelorMittal Minorca Mine Inc. submitted a Part 70 air emission permit reissuance application on November 19, 2015.

COMPLETED MINING PROJECTS

Project Name: **Magnetation Plant 2 Water Permit**
 Completed: Water quality permit reissued on October 10, 2015
 Project Coordinator: Suzanne Baumann
 Lead Staff: Erik Smith, Ben Underhill

Project Name: **US Steel – Keetac – Water Quality Permit Modification**
 Completed: Water quality permit modification to modify turbidity limits (NPDES/SDS Permit No. MN0031879) was issued on September 4, 2015, with an effective date of October 1, 2015
 Lead Staff: Brandon Smith

Project Name: **Magnetation Plant 2 – Initial Air Quality Permit Issuance**
 Completed: Part 70 major air quality permit was issued August 18, 2015 (Permit No. 06100078-001)
 Lead Staff: Hassan Bouchareb

Project Name: **United Taconite – Wet to Dry Particulate Control Change and Modify Scrubber Solids Wasting Requirements**
 Completed: Major air permit amendment to replace 22 wet scrubbers with baghouses that control particulate emissions from material handling operations and modify the scrubber solids wasting requirements. Issued on May 19, 2015 (Permit No. 13700113-006).
 Lead Staff: Owen Seltz

Project Name: **Hibbing Taconite Company – Wet to Dry Particulate Control Change and Modify Scrubber Solids Wasting Requirements**
 Completed: Air permit major modification (Permit No. 1370006-007) to update GP 019: In-Pit Crushing and Cobbing (IPCC) for increased flexibility. Issued on June 1, 2015.
 Lead Staff: Sarah Seelen

Project Name: **Northshore Mining Company – Material Handling Equipment Project**
 Completed: Moderate air permit amendment to install additional material handling equipment in the finished pellet yard was issued on February 5, 2015 (Permit No. 07500003-010).
 Lead Staff: Cindy Schafer

Project Name: **Northshore Mining Company – Low NOx Burner Project**
 Completed: Major air permit amendment was issued on January 26, 2015 for the installation of low NOx burners (Permit No. 07500003-009).

Lead Staff: Hassan Bouchareb

Project Name: **Magnetation Plant 4 Water Permit**
 Completed: Major water permit amendment was issued on November 12, 2014
 Lead Staff: Erik Smith

Project Name: **USS – Minntac Air Permit**
 Completed: Major air permit amendment to replace existing main burners on lines 4 and 5 with low NOx burners, December 5, 2013
 Lead Staff: Sarah Seelen

Project Name: **Northshore Mining Company – Peter Mitchell Mine Water Permit**
 Completed: NPDES/SDS Major Permit Modification, June 14, 2013
 Lead Staff: Stephanie Handeland

Project Name: **Magnetation Plant 4 Water Permit**
 Completed: SDS Permit Approved by MPCA Board, May 21, 2013
 Project Coordinator: Suzanne Baumann
 Lead Staff: Erik Smith

Project Name: **Magnetation Plant 2 Water Permit**
 Completed: Water Permit Modified October 26, 2012
 Project Coordinator: Katie Koelfgen
 Lead Staff: Stephanie Handeland

Project Name: **Essar Steel Minnesota Water Permit**
 Completed: Water Permit Issued October 1, 2012
 Project Coordinator: Joe Henderson
 Lead Staff: Stephanie Handeland

Project Name: **Essar Steel Minnesota Supplemental EIS, Air Permit**
 Completed: SEIS Deemed Adequate December 29, 2011
 Air Construction Permit, May 10, 2012
 Project Coordinator: Joe Henderson
 Lead Staff: Trevor Shearen

Project Name: **BART Determinations for Mines**

Completed: May 2012 (MPCA work complete. EPA work may remain.)
 Project Coordinator: None
 Lead Staff: Hongming Jiang

Project Name: **Magnetation (Pellet Plant and associated “Scram” Mining)**
 Completed: Cancelled by the Project Proposer
 Project Coordinator: Brian Timerson
 Lead Staff: Owen Seltz

Project Name: **USS – Keewatin Taconite Expansion Air and Water Permits**
 Completed: Air Construction, October 19, 2011
 Air Final, December 6, 2011
 Water Construction and Final November 15, 2011
 Project Coordinator: Brian Timerson
 Lead Staff: Owen Seltz, David Beil, Brandon Smith

Project Name: **Cliffs Erie Title V Air Permit Reissuance**
 Completed: December 14, 2011
 Project Coordinator: Suzanne Baumann
 Lead Staff: Sarah Seelen

Project Name: **Mining Resources (Steel Dynamics/Magnetation partnership)**
 (Separation of iron from natural ore tailings) Permitted as Scram Mining
 SDS Water Permit
 Completed: November 23, 2011
 Project Manager: Joe Henderson
 Project Coordinator: Brian Timerson
 Lead Staff: Kate Frantz

Project Name: **Hibbing Taconite Company**
 Major AQ Permit Amendment for In-Pit Crushing and Cobbing
 Completed: November 16, 2011
 Lead Staff: Sarah Seelen

Project Name: **Midland Standard, Inc.**
 Water Permit

Completed: August 10, 2011.
Project Manager: Chris Nelson
Lead Staff: Stephanie Handeland

Project Name: **Magnetation Mesabi Chief Tailings Basin 3** (Separation of iron from natural ore
tailings)
Water Permit
Completed: March 29, 2012.
Project Manager: Chris Nelson
Lead Staff: Stephanie Handeland

Project Name: **ArcelorMittal Minorca Mine** (Major amendment related to the Taconite MACT)
 Air Permit
 Completed: March 1, 2011
 Project Manager: Carolina Schutt
 Lead Staff: Steve Gorg

Project Name: **U of M Coleraine Minerals Research Laboratory**
 WQ Permit
 Completed: February 1, 2011
 Project Manager: Chris Nelson
 Lead Staff: Stephanie Handeland

Project Name: **Magnetation Plant #2** (separation of natural ore tailings)
 WQ (SDS) Permit (New)
 Completed: October 28, 2010
 Project Manager: Chris Nelson
 Lead Staff: Stephanie Handeland

Project Name: **United Taconite** - Company proposed to burn solid fuels
 AQ Permit Amendment
 Completed: August 19, 2010
 Project Manager: Chris Nelson
 Lead Staff: Dick Cordes

Project Name: **Northshore Mining Company** - major amendment to insert Nugget Pilot Plant
 operating conditions and limits back into the current operating permit
 AQ Permit Amendment
 Completed: On hold
 Project Manager: Ann Foss
 Lead Staff: Suzanne Baumann

Project Name: **Northshore Mining Company** - MPCA-initiated permit reopening to clarify the
 Control City Standard
 AQ Permit Amendment
 Completed: On hold
 Project Manager: Ann Foss
 Lead Staff: Suzanne Baumann

Project Name: **USS – Keewatin Taconite** – Permit to allow dewatering of the Perry Pit
 WQ Permit Amendment
 Completed: June 17, 2010
 Project Manager: Jeff Udd
 Lead Staff: Brandon Smith

Project Name: **Hibbing Taconite** – Major Amendment for In-Pit Crushing and Cobbing
AQ Permit Amendment
Completed: June 25, 2010
Project Manager: Brian Timerson
Lead Staff: Sarah Seelen

Project Name: **United Taconite** - administrative amendment for Greenball transfer project,
permit not needed for construction authorization
AQ Permit
Completed: June 22, 2010
Project Manager: Brian Timerson
Lead staff: Dick Cordes

Project Name: **Cooperative Mineral Resources (CMR)**
WQ Permit
Completed: June 2, 2010
Project Manager: Chris Nelson
Lead Staff: Stephanie Handeland

Project Name: **Northshore Mining Company** – Major Air Permit Amendment to extend stack
test deadline.
Completed: January 20, 2010
Project Manager: Ann Foss
Lead Staff: Trevor Shearen (Expedited)

Project Name: **Hibbing Taconite** - Title V Permit Reissuance, Burner Replacement
AQ Permit Amendment
Completed: January 14, 2010
Project Manager: Chris Nelson
Lead Staff: Owen Seltz, Dick Cordes

Project Name: **Mesabi Nugget Phase I** – Major Permit Amendment, changes associated with
final design and construction.
AQ Permit Amendment
Completed: January 8, 2010
Project Manager: Chris Nelson
Lead Staff: Joe Miller, Brian Timerson

Project Name: **Northshore Mining Company** – Peter Mitchell Mine Permit Reissuance
WQ Permit
Completed: August 11, 2009
Project Manager: Chris Nelson
Lead staff: Stephanie Handeland

Project Name: **Fugitive Dust Emission Factor** – MPCA provided input on fugitive dust emission factor being developed by the EPA.

Completed: February 12, 2009

Project Manager: Brian Timerson

Lead staff: Hongming Jiang

Project Name: **USS Minntac** - Backward-looking PSD permit for indurating process modification
AQ Permit

Completed: December 16, 2008

Project Manager: Chris Nelson

Lead staff: Hongming Jiang, Suzanne Venem

Project Name: **Northshore Mining Company** - administrative amendment to remove Control City Standard from air permit
AQ Permit

Completed: May 20, 2008

Project Manager: Ann Foss

Lead staff: Suzanne Venem

Project Name: **Hibbing Taconite Company** – Mining Area Permit Reissuance
WQ Permit

Completed: June 24, 2008

Project Manager: Jeff Udd

Lead Staff: Jeff Udd

Project Name: **Minnesota Steel Industries** AQ Permit Amendment
AQ Permit

Completed: May 30, 2008

Project Manager: Chris Nelson

Lead staff: Dick Cordes

Project Name: **Cliffs Erie / SDI** – Transfer of Permits
AQ Permit
WQ Permit
SW Permit

Completed: December 30, 2007

Project Manager: Jess Richards

Lead staff: Steve Gorg, Richard Clark, Julie Henderson

Project Name: **USS Minntac** – Permit Modification for Line 3 Scrubber Wastewater Treatment
WQ Permit

Completed: September 13, 2007 (permit modification issued)

Project Manager: Jeff Udd

Lead Staff: Jeff Udd

Project Name: **Essar Steel Minnesota LLC** (formerly known as Minnesota Steel Industries)
 AQ Permit
 WQ Permit
 Environmental Review – joint state/federal EIS with DNR the RGU
 Completed: August 2007 (EIS approval, water permits issuance), October 11, 2007 (air permit issued)
 Project Manager: Jeff Udd
 Lead Staff: Katrina Kessler, Mike Mondloch, Jim Sullivan, Richard Cordes

Project Name: **Cliffs Erie LLC** - Hoyt Lakes Plant, Pellet Yard Upgrade
 AQ Permit
 MACT Applicability
 WQ Permit
 Completed: October 10, 2005 (permits issued)
 Project Manager: Ann Foss
 Lead staff: Richard Clark, Mike Mondloch

Project Name: **USS Minntac** – Direct WQ discharge from their tailings basin
 Environmental Review – EIS with PCA the RGU
 Completed: December 22, 2005 (EIS deemed adequate by MPCA Board)
 Project Manager: Ann Foss
 Lead staff: John Elling, Richard Clark, Jim Strudell, Jeff Udd

Project Name: **Birch Lake Exploration Shaft**
 EAW
 AQ Permit
 WQ Permit
 Completed: December 12, 2005 (project withdrawn by proposer)
 Project Manager: Loren Voigt
 Lead staff: Richard Clark, Dick Cordes

Project Name: **Cliffs Erie LLC** - Hoyt Lakes Plant
 One Source/Two Source Applicability Determination
 Completed: December 2005 (determination completed)
 Project Manager: Loren Voigt
 Lead staff: Dick Cordes

Project Name: **Northshore Mining** - Start-up of Furnace 5 and associated equipment
 AQ Permit
 WQ Permit
 Environmental Review - EAWAERA
 Completed: April 22, 2006 (air permit issued; water permit issued December 2005)
 Project Manager: Jeff Stollenwerk
 Lead Staff: Dick Cordes, Jeff Udd, Dana Vanderbosch

Project Name: **MN Power/Cliffs Erie -Taconite Harbor** - Permit reissuance with split of permit between MN Power and CCI
WQ Permits

Completed: December 22, 2005 (permits issued)

Project Manager: Jeff Stollenwerk

Lead staff: Katrina Kessler

Project Name: **Taconite MACT/Permitting Integration**

New Rule Implementation Decisions

Completed: February 2006

Project Manager: Jeff Stollenwerk

Lead staff: Mike Mondloch

Project Name: **Hibbing Taconite Company** - various permit amendment applications (misc. administrative amendments and modification of parametric monitoring requirements)

AQ Permit

Completed: February 23, 2006

Project Manager: Jeff Stollenwerk

Lead staff: Hongming Jiang

Project Name: **Northshore Mining** - applicability determination for eliminating visible emission checks

AQ Permit

Completed: April 28, 2006

Project Manager: Jeff Stollenwerk

Lead staff: Dick Cordes

Project Name: **Northshore Mining** - Minor Mod of Mine permit to authorize movement of high sulphur rock

WQ Permit

Completed: April 30, 2006 (permit modified)

Project Manager: Loren Voigt

Lead staff: Richard Clark

Project Name: **USS Minntac** - Major Mod of Permit for Implications from Scrubber Installation

WQ Permit

Completed: July 2006 (permit modified May 21, 2006))

Project Manager: Loren Voigt

Lead staff: Jeff Udd

Project Name: **Northshore Mining** - Major Amendment for Monitoring Parameter Changes

AQ Permit

Completed: July 2006 (permit amended)

Project Manager: Jeff Udd

Lead staff: Mike Mondloch

Project Name: **Hibbing Taconite** – Minor Mod of Mine Permit (change in dust suppressant use)
 WQ Permit
 Completed: August 29, 2006 (permit modified)
 Project Manager: Loren Voigt
 Lead staff: Richard Clark

Project Name: **Cliffs Erie** - Land treatment of petroleum contaminated soils generated at
 former LTV site
 Solid Waste Permit
 Reporting Period: September 2006 (permit issued)
 Project Manager: Loren Voigt
 Lead staff: Julie Henderson

Project Name: **Mittal Steel USA** – East Reserve Project
 EIS (w/ DNR as the RGU)
 WQ and AQ Permits
 Reporting Period: February 2007 (EIS completed; air and water permits issued)
 Project Manager: Jess Richards
 Lead staff: Richard Clark, Mike Mondloch

Project Name: **USS Minntac** - Request for SEIS on EIS Alternative B: Lake Superior Watershed
 Discharge
 Environmental Review
 Completed: February 2007 (Response letter denying request)
 Project Manager: Jess Richards
 Lead staff: Richard Clark, Jim Strudell, Jim Sullivan, Jeff Udd